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To: Teachers

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RE: Converting Rubric Scores for End-of-Quarter Letter Grades

Introduction

There is no simple or single way to manipulate rubric scores so that they can be incorporated into end of quarter letter grades. This paper contains a set of possible approaches. Or, you may have developed a process of your own. Whatever approach you choose to use, it is important that you inform your students about your system. How grades are calculated should be open to students rather than a mystery. In addition, you need to make sure that the process that you use is reasonable and defensible in terms of what you expect students to know and be able to do as a result of being in your class.

In all cases, you might not want to use all papers/tasks students have completed as the basis for your end of quarter grades—you might choose certain pieces of student work, choose to emphasize certain traits for certain pieces, let students choose their seven "best" pieces, etc. You might only want to score certain traits on certain tasks.

You might consider placing most emphasis on works completed late in the grading period. This ensures that students who are demonstrating strong achievement at the end of a term are not penalized for their early "failure." It also encourages students to take risks in the learning process. Whatever you choose to do, you need to have a clear idea in your mind how it helps you communicate how students are performing in your classroom. In the end, what you need to have are adequate samples of student work that will allow you to be confident about how well students have mastered the skills that have been taught. (Do you have enough evidence to predict, with confidence, a student's level of mastery on their next piece of work?)

Down the road we will want to convene a group of teachers to come up with a common acceptable and defensible system for converting rubric scores to grades. In the short run here are several methods which can be used to convert rubric scores to letter grades.

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Methods:

The methods described here can be used with any tasks, papers, or projects which are scored using rubrics. The example used is from writing assessment, but the methods identified here are not restricted to writing.

In **Table 1** we have Johnny's scores on the 5 pieces of writing we agreed to evaluate this term on all six traits.

Table 1: Johnny's Writing Scores on Five Papers

Johnny's Scores	Ideas and Content	Organization	Word Choice	Sentence Fluency	Voice	Conventions	Total
Paper 1	3	2	2	3	1	4	15
Paper 2	4	2	3	4	3	4	20
Paper 3	5	4	5	5	2	3	23
Paper 4	4	4	4	4	2	4	23
Paper 5	5	5	5	5	4	4	28
Totals	21	17	19	21	12	19	109

METHOD 1: Frequency of Scores Method. Develop a logic rule for assigning grades. The following are just four of many possible ways you could go about setting up a rule for assigning grades in writing.

- ◆ To get an A in writing you have to have 50% of your scores at a 5 with no scores of Ideas and Content, Conventions, or Organization below 4.
- ◆ To get a B you have to have 50% of your scores a 4 or higher with no Ideas and Content, Conventions or Organization below 3, and any other score below a 3 counterbalanced by a score of 4 or higher. Etc.

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In this class, in writing,

- ◆ Mostly 4's and 5's is an "A"
- ◆ Mostly 3's and 4's is a "B"
- ◆ Mostly 2's and 3's is a "C"

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- ◆ To get 100% in writing you have to have 50% of your scores at a 5 with no scores of Ideas and Content, Conventions, or Organization below 4.
- ◆ To get 90% in writing you have to have 50% of your scores a 4 or higher with no Ideas and Content, Convention, or Organization below 3, and any other score below a 3 counterbalanced by a score of 4 or higher. Etc.

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- ◆ To get a C in writing, all writing must be at a 3 or higher. To get an A or a B, students need to choose 5 papers, describe the grade they should get on those papers, and justify the grade using the language of the six-trait model and specific examples from the written work.

Depending on how the rule finally plays out, Johnny might either get around an A (mostly 4's or 5's) or a B (lots of 4's or 5's, but there are more 4's than 5's) or 90% (there is one 3 in conventions) for the writing part of his grade. Or he might get an A by citing specific examples from the written work and the six-trait rubric that show he really understands what constitutes good writing, and is ready to be a critical reviewer of his own work.

METHOD 2: Total Points. Add the total of possible points students can get on rubric scored papers.

First figure out the number of points possible. To do this, multiply the number of papers being evaluated by the number of traits assessed. Then, multiply that by 5 (or the highest score possible on the rubric). In this case, with 5 papers we would multiply 5 (papers) times 6 (traits) times 5 (highest score on the rubric) and get 150 total points possible.

Then we add a student's scores (Johnny has 109 points) and divide by the total possible— $109 \div 150 = 0.73$. so, Johnny has 73% of possible points, so his writing grade will be 73%. I'll need to weight and combine it with other scores to come up with a single letter grade for the course.

METHOD 3: Total Weighted Points. Add the total of possible points students can get on rubric scored papers weighting those traits deemed most important.

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First, figure how many points are possible. You will need to figure out which traits you are weighting. In **Table 2**, assume that we decided to weight Ideas and Content, Organization, and Conventions three times as important as the other three traits. The way to come up with the total points possible is then shown. First, you add all of the scores for each trait (adding the numbers in the column), then multiply the total in each column by its weight. Finally you add up the total in each column to come up with the grand total number of points.

Table 2: Total Possible Weighted Points

Total Possible Points	Ideas and Content	Organization	Word Choice	Sentence Fluency	Voice	Conventions	
Paper 1	5	5	5	5	5	5	
Paper 2	5	5	5	5	5	5	
Paper 3	5	5	5	5	5	5	
Paper 4	5	5	5	5	5	5	
Paper 5	5	5	5	5	5	5	
Totals	25	25	25	25	25	25	
Weights	3	3	1	1	1	3	
Weighted Total	75	75	25	25	25	75	300

Table 3 shows Johnny's scores again and the total using the weighted formula. Johnny has 223 out of 300 weighted points or 74% of total points in writing.

Table 3: Johnny's Writing Scores on Five Papers—With Weighted Totals

Johnny's Scores	Ideas and Content	Organization	Word Choice	Sentence Fluency	Voice	Conventions	
Paper 1	3	2	2	3	1	4	
Paper 2	4	2	3	4	3	4	
Paper 3	4	4	5	5	2	3	
Paper 4	5	4	4	4	2	4	
Paper 5	5	5	5	5	4	4	
Totals	21	17	19	21	12	19	
Weights	3	3	1	1	1	3	
Weighted Total	63	51	19	21	12	57	223

Depending on your focus, you might only want to include the traits you have been working on, weighting others as 0.

METHOD 4: Linear Conversion. Come up with a connection between scores on the rubric and percents, directly. We might find that the wording of a 3 on the six-trait scales comes close to our definition of what a "C" is in district policy, then turn the rubric score into a percent score based on the definition. For example:

1=60%	3=80%	5=100%
2=70%	4=90%	

You can then treat the rubric scores the same way you treat other grades in your grade book.

CONCLUSION

One difficulty with the last three approaches is that it makes the method seem more scientific than it is. For example, it is not always clear that the distance between a score of 1 and a score of 2 is the same as the distance between a score of 4 and a score of 5, and linear conversions, or averaging numbers ignores those differences.

Once you, as teacher, arrive at a method for converting rubric scores to a scale that is comparable to other grades, the responsibility is on you to come up with a *defensible* system for weighting the pieces in the grade book to come up with a final grade for students. This part of the teaching process is part of the professional art of teaching. There is no single right way to do it; however, whatever is done needs to reflect evidence of **students' levels of mastery** of the targets of instruction.